ABSTRACT

A method, machine-readable code and automated system for assaying or monitoring the extent of joint or bone deformity reported by a summarized score that may include joint space narrowing, bone erosion and periarticular

5   osteoporosis in a joint-degenerative or joint-damaging disease in a subject are disclosed. From a digitized image of one of the subject's straight bone terminated with a joint such as fingers, coordinates of right and left bone contours of a selected middle or proximal phalange are determined, and these coordinates are in turn used to determine the coordinates of a minimum width in

10   the middle region of the phalange and one or more apices in a region adjacent at least one side of a joint of the selected phalange. These latter coordinates are used in selecting a reference joint contour representing normal-bone contour for that phalange, or the contour of the patient phalange from an earlier x-ray image. Guided by the reference joint contour, a region of the selected joint of the patient

15   is analyzed to assay or monitor the extent of joint or bone deformity in the subject.